

IN THE CLAIMS:

Amend the following claims:

1. (original) A perpendicular magnetic recording system comprising:
a perpendicular magnetic recording medium having a soft magnetic underlayer and
a magnetic head having a magnetic recording head and a magnetic read head,
wherein said magnetic read head comprises an upper shield, a lower shield and a read
element provided between said upper shield and said lower shield,
wherein said magnetic recording head comprises a main pole for recording a
magnetization reversal on said perpendicular magnetic recording medium,
the perpendicular magnetic recording system satisfying
$$T_{b1} < (B_{s1} \times T_m \times T_{ww}) / 2(B_{s2} \times (T_m + T_{ww})),$$

wherein T_{b1} is the thickness of said soft magnetic underlayer, B_{s2} is the saturation flux
density of the same, T_m is the thickness of said main pole along a track direction in the vicinity
of its floating surface, T_{ww} is the track width of the same, and B_{s1} is the saturation flux density of
the same.
2. (original) The perpendicular magnetic recording system according to claim 1, wherein said
magnetic recording head further comprises an auxiliary pole.
3. (original) The perpendicular magnetic recording system according to claim 2, wherein said
auxiliary pole is said upper shield.
4. (original) The perpendicular magnetic recording system according to claim 1 wherein T_{ww} is
less than 0.5 μm .
5. (original) The perpendicular magnetic recording system according to claim 1, wherein a
distance between said main pole and said auxiliary pole is greater than or equal to 0.5 μm .

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6. (original) The perpendicular magnetic recording system according to claim 1, wherein T_{bl} is smaller than or equal to $0.2\ \mu\text{m}$.